

Dear Angler:

As you requested, we are enclosing summaries of the results of the Yellowstone National Park Volunteer Angler Report (VAR) for 2000. For the past 27 years, this volunteer survey has been a cooperative effort between anglers and biologists to gather information that assists NPS in the management of Yellowstone's fisheries.

Approximately 3,800 VAR cards containing important statistical data were returned by anglers in 2000. Since the data gathered from these cards are used to calculate estimates of parkwide angling, it is important that anglers such as yourself continue to provide this information to park fishery managers.

Thank you for your involvement and interest. If you have questions or comments, please contact Dan Mahony, Fisheries Biologist, at (307) 344-2280.

Sincerely,

Michael V. Finley
Superintendent

Enclosures

YELLOWSTONE NATIONAL PARK ANGLING - 2000

Approximately 2.8 million people visited Yellowstone National Park in 2000. The National Park Service issued 67,687 fishing permits this year, and anglers returned 3,798 usable Volunteer Angler Report catch cards (5.6 % of those issued). Exit gate surveys, where visitors are interviewed as they leave the park, revealed that nearly 4 % of anglers who purchased a fishing permit did not fish, which resulted in an estimate of 65,990 total anglers fishing in 2000. The following sport fishery statistics were estimated using data from exit gate surveys and the volunteer angler report system.

In 2000, parkwide angler use (total number of days anglers spent fishing) was 264,250, and total hours spent fishing was estimated at 712,642 hrs. Anglers landed 713,990 fish and creeled only 22,109, releasing more than 97 % of all fish landed. The average angler fished 2.8 days, 1.4 different waters/day, and 2.7 hours/day in 2000. Mean annual landing and creel rates were 1.00 and 0.03 fish/hour, respectively. Nearly 81 % of single-day anglers landed one or more fish.

Cutthroat trout *Oncorhynchus clarki* were the most frequently captured fish in 2000 (59%), followed by rainbow trout *Oncorhynchus mykiss* (16%), brook trout *Salvelinus fontinalis* (9%), and brown trout *Salmo trutta* (8%). Lake trout *Salvelinus namaycush*, arctic grayling *Thymallus arcticus*, mountain whitefish *Prosopium williamsoni*, and unidentified fishes made up the remaining 8 % of angler landed fish.

Mean length of 33,465 fish reported landed from the volunteer angler report system was 12.9 inches (328 mm); 59 % of these fish were >12 inches (305 mm), and 47 % were >14 inches (356 mm). Lake trout had the greatest average length (17.6 inches; 447 mm), followed by cutthroat trout (14.4 inches; 366 mm), mountain whitefish (12.4 inches; 315 mm), brown trout (12.0 inches; 305 mm), rainbow trout (10.6 inches; 269 mm), arctic grayling (10.1 inches; 257 mm), and brook trout (6.9 inches; 175 mm).

An estimated 83 % of park anglers reported being satisfied with their overall fishing experience in 2000; 72 % and 78 %, respectively, reported being satisfied with numbers and sizes of fish landed. Satisfied anglers landed about 1.1 fish/hour (mean length, 13.0 inches or 330 mm) and 3 fish/day. Anglers unsatisfied with their fishing experience landed over 1 fish/day (0.6 fish/hour) that were smaller (mean length, 11.2 inches or 284 mm) in size. Mean angler-skill level was 1.98 (experienced). Fishery statistics for 23 lakes and streams that collectively constituted approximately 96 % of reported parkwide angler use in 2000 are listed in Table 1. Parkwide angling statistics for the period 1975-2000 are listed in Tables 2 and 3.

Table 3. Estimates of park visitors, fishing permits issued, total parkwide anglers, and total parkwide angler days in Yellowstone National Park, 1975-2000.

Year	Total Park visitors	Total * Park Fishing Permits	Total parkwide anglers	Total Parkwide Angler Days	95% confidence limits
1975	2,246,100	191,600	136,300	257,300	248,400 – 266,300
1976	2,525,200	213,200	151,700	284,200	278,500 – 298,900
1977	2,487,100	217,000	154,600	311,300	304,000 – 318,500
1978	2,623,100	218,000	155,700	333,800	326,200 – 341,300
1979	1,891,900	195,100	139,100	291,300	274,500 – 308,200
1980	2,009,600	184,200	130,800	311,300	287,000 – 334,600
1981	2,544,200	172,300	160,000	383,400	363,400 – 403,300
1982	2,404,900	205,000	152,000	332,500	314,700 – 350,300
1983	2,405,700	166,800	120,500	275,900	261,800 – 289,900
1984	2,263,000	176,800	135,000	329,200	305,400 – 341,000
1985	2,262,500	166,700	123,800	279,000	260,800 – 297,200
1986	2,405,100	163,300	124,900	294,800	269,300 – 320,400
1987	2,618,200	183,900	151,500	370,900	349,100 – 392,800
1988	2,219,100	165,700	134,600	293,800	272,700 – 314,900
1989	2,680,400	159,200	124,400	320,900	301,100 – 340,700
1990	2,857,100	171,700	150,400	422,100	386,700 – 457,500
1991	2,957,900	187,200	161,100	403,100	372,500 – 433,800
1992	3,142,600	157,800	130,800	343,400	324,200 – 362,700
1993	2,912,200	161,000	141,100	398,100	371,400 – 424,700
1994	3,046,100	90,800	88,300	237,700	223,000 – 252,300
1995	3,125,300	87,600	85,400	270,000	237,300 – 302,300
1996	3,012,200	69,200	69,600	233,900	218,900 – 248,900
1997	2,889,500	67,900	67,000	240,100	216,500 – 263,700
1998	3,120,800	71,800	70,700	232,300	215,200 – 249,300
1999	3,130,400	70,200	67,700	233,700	203,700 – 263,800
2000	2,838,200	67,100	65,990	264,300	219,000 – 309,400

• Prior to 1994, data is based on the number of free permits issued. Beginning in 1994, data is based on number of permits sold.

Table 1. Fishery statistics for Yellowstone National Park waters with 20 or more angler days reported that collectively constituted approximately 96% of the estimated parkwide angler use in 2000.

	% of total parkwide angler days	Total reported angler days	Number of anglers	Mean length of angler day (h)	Angler days (trips)	Angler effort (hours)	Landing rate (fish/hr)	Creel rate (fish/hr)	Total fish landed	Total fish creeled	Mean length fish landed (inches)	Mean length fish creeled (inches)	% anglers landing 1 or more fish	Mean * expertise	% anglers satisfied with:		
															Overall experience	Numbers caught	Sizes caught
Parkwide Fishery	100	6,501	65,990	2.70	264,250	712,642	1.00	0.03	713,990	22,109	12.9	13.9	81	1.98	83	72	78
Yellowstone Lake	31.0	2,016	17,844	2.91	81,928	238,454	0.93	0.03	220,813	6,555	15.9	16.5	78	1.84	78	67	84
Yellowstone River	13.1	851	8,218	2.70	34,569	93,367	0.82	0.02	76,055	1,519	14.7	14.0	77	2.05	81	65	83
Firehole River	9.1	590	6,255	2.58	23,959	61,779	1.07	0.01	65,952	839	10.0	11.4	82	2.05	85	75	64
Madison River	8.5	551	5,508	2.51	22,373	56,250	0.79	0.02	44,543	907	13.2	9.7	72	2.02	80	60	71
Lamar River	6.9	448	4,656	2.95	18,186	53,701	0.97	0.02	52,319	1,178	12.8	10.6	90	1.97	88	78	88
Slough Creek	5.3	342	3,805	3.39	13,877	47,073	0.93	0.02	43,983	706	14.1	12.1	88	2.12	89	81	86
Gibbon River	4.8	314	3,631	1.95	12,739	24,881	1.00	0.04	24,892	930	7.7	9.5	72	1.93	80	68	57
Soda Butte Creek	3.1	204	2,189	2.80	8,267	23,133	0.94	0.01	21,757	295	13.7	17.0	91	2.18	91	81	91
Gardner River	2.2	145	1,842	2.10	5,869	12,334	2.01	0.08	24,833	1,022	8.0	9.4	90	1.96	88	86	68
Lewis Lake	2.2	142	1,320	2.80	5,747	16,111	0.68	0.18	10,907	2,890	15.4	14.6	63	1.86	90	74	86
Shoshone Lake	1.6	105	817	2.77	4,243	11,740	0.78	0.11	9,137	1,273	17.9	17.5	88	1.82	92	74	87
Gallatin River	1.2	75	817	2.38	3,023	7,193	0.92	0.02	6,593	173	12.5	15.5	79	2.09	84	71	84
Grebe Lake	1.0	62	903	1.93	2,495	4,811	2.76	0.05	13,262	215	9.8	11.0	91	2.18	90	88	74
Lewis River	0.8	52	660	1.98	2,088	4,135	0.67	0.06	2,762	229	12.3	15.8	62	1.97	83	78	72

Table 1. Continued.

	% of total parkwide Angler days	Total reported Angler days	Number of anglers	Mean length of angler day (h)	Angler days (trips)	Angler effort (hours)	Landing rate (fish/hr)	Creel rate (fish/hr)	Total fish landed	Total fish creeled	Mean length fish landed (inches)	Mean length fish Creeled (inches)	% anglers landing 1 or more fish	Mean expertise	% anglers satisfied with:		
															Overall experience	Numbers caught	Sizes caught
Indian Creek	0.7	47	521	1.61	1,885	3,040	1.41	0.09	4,284	267	6.2	7.2	90	1.64	75	67	46
Snake River	0.7	43	521	2.30	1,722	3,963	0.84	0.02	3,309	91	10.7	19.0	90	1.96	85	74	81
Nez Perce Creek	0.6	36	452	2.03	1,438	2,914	0.83	0.01	2,410	34	8.4	-	65	2.23	90	71	71
Cascade Lake	0.6	36	608	1.95	1,438	2,810	1.79	0.01	5,018	33	9.0	-	94	1.88	100	100	81
Heart Lake	0.5	33	261	4.30	1,316	5,656	1.05	0.20	5,911	1,150	18.1	20.2	60	2.07	87	87	80
Lewis Channel	0.5	31	382	3.06	1,235	3,781	1.19	0.07	4,500	258	17.2	17.4	88	2.33	95	95	90
Trout Lake	0.4	28	347	2.66	1,113	2,955	0.59	0.01	1,746	35	17.2	-	75	2.25	84	74	79
Bechler River	0.4	24	313	2.41	950	2,290	1.86	0.01	4,268	27	11.2	-	92	2.22	83	83	56
Obsidian Creek	0.3	20	261	2.21	787	1,742	2.19	0.01	3,808	21	5.9	-	100	1.80	93	93	43

* Based on: 1.0 = inexperienced; 2.0 = experienced; 3.0 = expert.

Table 2. Estimates of angler use, effort, success, and harvest for Yellowstone National Park, 1975-2000.

Year	Angler days	Mean length of angler day (h)	Total hours fished (days x h)	Landing rate (fish/hr)	Total fish landed	Creel rate (fish/hr)	Total fish creeled	% of anglers satisfied with			Average length of fish landed (in) ^a	Mean expertise ^b
								Overall experience	Numbers caught	Sizes caught		
1975	257,300	2.31	594,400	1.09	647,900	0.23	136,700	77	74	75	13.3	--
1976	284,200	2.36	670,700	1.02	684,100	0.20	134,100	74	69	69	13.2	1.90
1977	311,300	2.33	725,300	0.98	710,800	0.20	145,100	75	68	70	13.4	1.83
1978	333,800	2.23	744,400	0.99	736,900	0.17	126,500	73	66	68	13.4	1.86
1979 ^c	291,300	2.49	725,300	1.01	731,100	0.15	107,300	73	67	68	13.6	1.88
1980	311,300	2.44	758,000	0.96	725,300	0.13	101,000	73	66	68	13.4	1.87
1981	383,400	2.41	923,000	0.93	844,700	0.12	110,800	73	65	66	13.4	1.88
1982	332,500	2.34	777,600	0.95	740,200	0.14	107,500	74	67	68	13.5	1.88
1983	275,900	2.36	652,100	0.95	622,400	0.11	71,600	76	69	68	13.6	1.89
1984	329,200	2.40	790,100	0.93	732,700	0.12	92,100	76	68	69	13.5	1.91
1985	279,000	2.47	688,500	0.92	629,700	0.10	69,800	76	68	71	13.3	1.90
1986	294,800	2.49	734,700	1.01	740,900	0.10	73,400	79	72	72	13.3	1.93
1987	370,900	2.47	917,800	0.94	865,900	0.07	61,600	73	64	66	12.3	1.93
1988	293,800	2.56	753,400	1.05	788,100	0.09	65,300	78	69	70	12.8	1.90
1989	320,900	2.50	801,300	0.92	735,800	0.07	55,400	77	68	71	13.2	1.91
1990	422,100	2.47	1,042,900	0.97	1,009,900	0.06	61,700	80	71	73	13.3	1.88
1991	403,100	2.62	1,059,300	0.98	1,039,700	0.06	66,600	81	72	74	13.4	1.90
1992	343,400	2.57	881,600	0.91	802,700	0.04	37,000	78	68	72	12.9	1.92
1993	398,100	2.58	1,026,100	0.92	942,600	0.06	56,600	84	73	78	13.5	1.91
1994	237,700	2.73	647,900	0.84	541,000	0.04	28,500	77	65	71	13.3	1.91
1995	270,000	2.52	681,300	0.85	580,800	0.06	42,100	79	67	73	13.3	1.90
1996	233,900	2.70	631,700	0.80	507,500	0.05	29,400	77	66	72	13.1	1.90
1997	240,100	2.45	587,800	0.95	558,100	0.06	32,100	83	72	78	13.0	1.94
1998	232,300	2.60	604,300	0.99	596,600	0.04	21,500	83	75	76	13.1	1.97
1999	233,700	2.62	613,000	0.98	601,300	0.04	23,300	83	73	76	12.8	1.95
2000	264,300	2.70	712,600	1.00	714,000	0.03	22,100	83	72	78	12.9	1.98

^a Unadjusted average lengths for 1975-1984. Adjusted lengths for 1985-2000 are 13.6, 13.7, 12.8, 13.3, 13.6, 13.7, 13.7, 13.4, 13.9, 13.7, 13.6, 13.5, 13.4, 13.4, 13.2 AND 13.3 in, respectively.

^b Based on: 1.0 = inexperienced; 2.0 = experienced; 3.0 = expert.

^c Revised from that reported in Jones et al. (1980).